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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/602,549
Filing Date: June 23, 2003
Appellant(s): LEVY, KENNETH L.

Steven W. Stewart
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 08/06/2008 appealing from the Office action mailed 11/15/2007.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6950532	Schuman et al.	9-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-16, 23, 25, 27-30, 33, 35-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Schuman et al. (US6950532, hereinafter Schuman).

As to claim 1, Schuman shows:

A method of embedding identification data in video, the video comprising a plurality of video frames (figure 8), said method comprising:

embedding (e.g., writing effects and security info onto content media) the identification data (e.g., "[d]isruption content may have a multitude of new content") in a first video frame prior to distribution or

projection of the video (column 7, lines 42-53) (e.g., "this information […] may be carried in the digital film itself" and "the disruption may be pre-authored"), the embedded identification data being visually perceptible upon examination of the first frame (figure 8, column 6, lines 24-34);

selecting a second video frame (e.g., "generated images" means that more than one image is generated, and images can be "image frames"), wherein the first and second video frames are separate frames (column 6, lines 24-34);

and embedding the identification data in the second video frame prior to distribution or projection of the content (column 7, lines 42-52), the embedded identification data being visually perceptible upon examination of the second frame, wherein the identification data is generally imperceptible upon real-time rendering of the video (e.g., "human eye many not detect them") (figure 8, column 6, lines 24-34).

As to claim 2, Schuman shows:

The method of claim 1, wherein the selecting comprising selecting the second frame so that the repetition of the embedded identification data is imperceptible to the human conscious mind when rendered (e.g., "human eye many not detect them") (column 6, lines 24-34).

As to claim 3, Schuman shows:

The method of claim 1, wherein the identification data is embedded in the same frame location in each of the first and second frames (e.g., if a human is to perceive a message, the message has to be in substantially the same location from one frame to the next) (column 6, lines 58-67).

As to claim 4, Schuman shows:

A detection method for the video embedded according to claim 1, comprising visually inspecting the first or second frames (e.g., "generated images may be captured […] creating anomalous images") (figure 8, column 6, lines 32-43).

As to claim 5, Schuman shows:

A detection method for the video embedded according to claim 1, comprising providing device-aided character recognition of the first or second frames to detect the identification data frames (e.g., humanly perceiving the message) (column 6, lines 58-67).

As to claim 6, Schuman shows:

The method of claim 1 wherein the identification data is embedded in each of the first and second frames in the form of a digital watermark, yet the embedded digital watermarks remain visually perceptible upon examination of the first frame and second frame (column 6, lines 57-63).

As to claim 7, Schuman shows:

The method of claim 6, wherein the watermark visibility is due at least in part to watermark signal strength or intensity (column 6, lines 28-36 and lines 57-63).

As to claim 8, Schuman shows:

The method of claim 2, wherein the second frame is selected so that the repetition of the embedded identification data is imperceptible to the unconscious human mind (e.g., "human eye many not detect them") (column 6, lines 24-34).

As to claim 9, Schuman shows:

The method of claim 1, wherein the identification data comprise at least one of text, numbers, codes, images or graphics (column 6, lines 58-63).

As to claim 10, Schuman shows:

The method of claim 3, wherein the same location comprises a window (e.g., image frames) (column 6, lines 24-34).

As to claim 11, Schuman shows:

The method of claim 1, wherein the identification data comprise a plurality of identifiers (column 6, lines 58-63).

As to claim 12, Schuman shows:

The method of claim 11, wherein each of the plurality of identifiers (e.g., text or logos) is embedded to be spatially located in a separate frame location (e.g., "mark the content with messages") with respect to each other (column 6, lines 58-67).

As to claim 13, Schuman shows:

The method of claim 12, wherein the separate frame locations are the same for each of the first frame and second frames (e.g., if a human is to perceive a message, the message has to be in substantially the same location from one frame to the next) (column 6, lines 58-67).

As to claim 14, Schuman shows:

The method of claim 11, wherein the plurality of identifiers comprise at least two identifications (e.g., advertisement) selected from a group comprising: a content identification (e.g., text [...] identifying content), a distributor identification (e.g., logo), copy restriction information (e.g., "copy protected"), and an exhibition identification (e.g., "time of the event") (column 6, line 58 to column 7, line 4).

As to claim 15, Schuman shows:

The method of claim 1, wherein the identification data comprises at least one identification selected from a group of identifications comprising: content identification, a distributor identification, copy restriction information, and an exhibition identification (column 6, lines 58-67).

As to claim 16, Schuman shows:

A detection method for the video embedded according to claim 1, comprising averaging a plurality of the video frames including the first and second frames, wherein the averaging improves the signal to

noise ratio of the identification data to video content (e.g., disruption content is inserted so that it " becomes visible when played [...] due to temporal expansion" when reconstructed, thus "improve[ing] the signal to noise ratio of the identification data") (column 6, lines 33-43).

As to claim 23, Schuman shows:

A method of marking content with auxiliary data, the method characterized in that the auxiliary data is embedded prior to distribution or projection of the video (column 7, lines 42-52) to be humanly perceptible if examined in a finite segment or frame of the content (e.g., generated images may contain disruption content), but is embedded so as to be humanly imperceptible when examined as the content is rendered in real-time (e.g., "human eye many not detect them") (figure 8, column 6, lines 24-34).

As to claims 25, 38 Schuman shows:

wherein the content comprises video (figure 8, "content media").

As to claim 27, Schuman shows:

A method of steganographically hiding data (e.g., watermarks) in media content (column 3, lines 42-49), wherein the media content comprises a plurality of segments including masking content (e.g., generated images) (column 3, lines 20-22), said method being characterized in that

at least two of the media segments are provided with the data (e.g., generated images) (column 3, lines 20-22) prior to distribution or projection of the video (column 7, lines 42-52),

wherein the data comprises humanly perceptible data (e.g., "inserting a human perceivable image") (column 3, lines 42-49), and

wherein the data remains perceptible upon individual examination of the at least two media segments but consciously imperceptible as the media content is rendered in real time since the data is below a perceptual threshold due to the masking content (column 6, lines 32-40).

As to claim 28, Schuman shows:

The method of claim 27 wherein the media content comprises video (e.g., generated images) (column 3, lines 20-22), the plurality of segments comprises video frames (e.g., image frames) (column 6, lines 24-34) and the masking content comprises video frames (e.g., "spaced marks [...] spaced so as to coincide") without the data (column 6, lines 16-24).

As to claim 29, Schuman shows:

The method of claim 28, wherein the data comprises an image of at least one of a hexadecimal number, binary number or decimal number (e.g., date) (column 6, lines 58-67)..

As to claim 30, Schuman shows:

The method of claim 28, wherein the data comprises an image of text (column 6, lines 58-67).

As to claim 33, Schuman shows:

A detector to detect the data provided according to claim 28, wherein the detector averages a plurality of the video frames so that the provided data becomes consciously perceptible (column 3, lines 43-49).

As to claims 35, 39, Schuman shows:

The method of claim 27 wherein the auxiliary data comprises an identifier comprising I's and 0' s, where the I's are embedded in the content through modification to content data (column 7, lines 42-52) (inherent, since a digital film is comprised of zeros and ones).

As to claim 36, Schuman shows:

The method of claim 35 wherein the O's are represented in the content through the absence of modification to content data (column 7, lines 42-52) (inherent, since a digital film is comprised of zeros and ones).

As to claim 37, Schuman shows:

A method of marking content with auxiliary data comprising:

obtaining content;

embedding auxiliary data in the content through modifications of portions of the content, the modifications occurring prior to distribution or projection of the content, the modifications being humanly perceptible if examined in a finite segment or frame of the content, but provided in the content so as to be humanly imperceptible when examined as the content is rendered or projected in real-time; and

distributing or projecting the content (column 7, lines 42-52) (the film is made, the disruption content is pre-authored into the digital film, and then it is distributed).

As to claim 40, Schuman shows:

A detecting method comprising:

obtaining content,

the content including auxiliary data embedded therein,

the embedding being accomplished through modifications of portions of the content,

the modifications occurring prior to obtaining the content (the film is made, the disruption content is pre-authored into the digital film, and then it is distributed),

the modifications being humanly perceptible if examined in a finite segment or frame of the content, but provided in the content so as to be humanly imperceptible when examined as the content is rendered or projected in real-time (e.g., "human eye many not detect them");

averaging a plurality of content portions; and

detecting the auxiliary data from data representing averaged content portions, the auxiliary data being relatively more detectable from the data representing averaged content portions compared to individual portions including the auxiliary data (e.g., disruption content is inserted so that it " becomes visible when played [...] due to temporal expansion" when reconstructed, thus "improving the signal to noise ratio of the identification data") (column 6, lines 24-34; column 6, lines 33-43; column 7, lines 42-52).

References to specific columns, figures or lines should not be limiting in any way. The entire reference provides disclosure related to the claimed invention.

(10) Response to Argument

Appellant's arguments have been fully considered but are not persuasive. Examiner reiterates that references to specific columns, figures or lines should not be limiting in any way. The entire reference provides disclosure related to the claimed invention. Appellant argues that:

Claim 40

Schuman does not anticipate claim 40 because it does not include - either expressly or inherently - at least averaging a plurality of content portions, and detecting auxiliary data from data representing averaged content portions, in combination with its other claim elements. One of ordinary skill in the art would read the terms "averaging" and "averaged" in claim 40 according to their conventional meanings. (e.g., see the online Merriam-Webster dictionary). The final Office Action cited Schuman at Col. 6, lines 24-34, Col. 6, lines 33-43 and Col. 7, lines 42-52 as meeting these features. See the final Office Action, page 8, last two lines. We respectfully disagree with this analysis. For example, while these passages discuss timing of imaging devices, temporal expansion, spacing of image elements, and disruption directives, there is no discussion regarding detecting auxiliary data from data representing averaged content portions. The final Office Action further alleges that the term "spacing" means "averaging" in the context of claim 40. See the final Office Action, page 9, lines 15-23, citing Schuman at Col. 6, lines 16-24 and lines 33-43. This is an improper reading of Schuman, one that an ordinarily skilled artisan would not make. Schuman' s reason for his "spacing" is to provide so-called moire patterns in a recorded image. See Schuman at Col. 6, lines 21-24. Such a disclosure would not lead one of ordinary skill in the art to average a plurality of content portions, and detect auxiliary data from data representing averaged content portions. where the auxiliary data 1s relatively more detectable from the data representing averaged

content portions compared to individual portions including the auxiliary data, as recited in claim 40 (page 7, last paragraph to page 8, last paragraph).

Examiner disagrees.

Col. 6, lines 16-24 of Schuman discusses "inserting spaced marks into a generated image so as to coincide with the spacing of the image elements on image sensing devices optical sensors." In other words, spacing said marks, such that, on average, said marks (i.e., identification content) coincide with the shutter or other optical sensor timing of a video recording device as it records. As one of ordinary skill in the art would readily recognize, when playing back a first group of frames, the greater the number of frames of said group of frames which contain said marks, the more visibly the marks will be displayed. Meanwhile, the opposite is also true, so that the fewer the number of frames of said first group of frames which contain said marks, the less visibly said marks will be displayed. The frames that do not contained said marks are interpreted as the "space" between marks. Thus, when Schuman teaches "inserting spaced marks into a generated image so as to coincide with the spacing of the image elements on image sensing devices optical sensors" one of ordinary skill in the art would reasonably understand that the marks are spaced such that, on average they coincide with the shutter of an image sensing device. Col. 6, lines 33-43 of Schuman further discusses that if the "generated images are of a reduced intensity, the human eye may not detect them [...] However, because of the timing of the imaging device, the generated images may be captured for much longer periods of time." In other words, the generated images (including the marks) need to be spaced, such that on average the human eye may not detect them, but a video recording device does. Therefore, these statements clearly show detecting auxiliary data (e.g., marks including identification content) from data representing averaged content portions. (e.g., the displayed data is displayed such that on average a human may not detect the marks, but a video recording device does).

Claim 16

Schuman does not anticipate claim 16 because it does not include - either expressly or inherently - at least averaging a plurality of the video frames including the first and second frames, wherein the

averaging improves the signal to noise ratio of the identification data to video content. The final Office Action uses the same rational to reject claim 16 as it did to reject claim 40. See the final Office Action, page 10, lines 7-19. That is, the final Office Action equates "spacing" with "averaging." As discussed above with respect to claim 40, these "spacing" does not mean the same thing as "averaging". Schuman uses "spacing" to provide so-called moir6 patterns in a recorded image. See Schuman at Col. 6, lines 21-24. In claim 16, the averaging improves the signal to noise ratio of the identification data to video content (page 9, antepenultimate paragraph, to page 10, second paragraph).

Examiner disagrees.

As stated above in the response to the argument regarding claim 40, Schuman teaches that the number of frames which do not contain marks as well as the number of frames which do contain marks are manipulated so that on average, a the human eye may not perceive the marks, but a video recording device does. In other words, the marks are spaced among the frames such that, on average, a human eye may not perceive the marks, but a video recording device does.

Claim 33

Schuman does not anticipate claim 33 because it does not include - either expressly or inherently - at least a detector averaging a plurality of the video frames so that the provided data becomes consciously perceptible (page 10, antepenultimate paragraph).

Examiner disagrees.

Col. 3, lines 43-49 of Schuman discusses inserting a watermark. Further, column 6, lines 57-63 of Schuman discusses that a watermark may identify a location and time of the event being recorded. Furthermore, this passage discusses that said watermark might be part of the image content produced by the disclosed technique of inserting disruption content. Further, col. 6, lines 40-43 of Schuman discusses that the disruption content may become visible, or detected, when played due to temporal expansion of the timing differences between an IRD (e.g., camcorder) and IGD (TV or projector). Thus, one of ordinary skill in the art would readily understand the disruption content, including watermarks, might become visible (i.e., becomes consciously perceptible) to identify a location and time of the even being recorded

when played. Also, one of ordinary skill in the art would readily understand the recitation "timing differences" refers to the frames-per-second timing differences between the IRD and the IGD, and that the disruption content (e.g., watermark identifying location and time) becomes visible because the frames-per-second timing difference between the IRD and IGD favors displaying the disruption content, *on average* [emphasis added]. Thus, Schumann clearly teaches averaging a plurality of video frames so that provided data becomes consciously perceptible.

Claim 1

Schuman does not anticipate claim 1 because it does not include - either expressly or inherently - at least embedding identification data in a first video frame prior to distribution or projection of the video, and embedding the identification data in the second video frame prior to distribution or projection of the content, the embedded identification data being visually perceptible upon examination of the second frame, wherein the identification data is generally imperceptible upon real-time rendering of the video, in combination with other features of claim 1. The cited Schuman passage, Col. 7, lines 42-53 (see the final Office Action, page 2, last paragraph) states that so-called "disruption directives" may be carried in digital film data itself. These "disruption directives" cooperate with a so-called "disruptor." The disrupter uses the disruption directives to disrupt projection by introducing anomalies or modulation in projected film. See Col. 5, lines 11-14, Col. 8, lines 52-64 and Figs. 1-6. Thus, these "disruption directives" control or influence the disrupter in introduce separate anomalies in projected film. The relied upon Schuman passage, Col. 7, lines 42-53, does not embed the disruption directives (or disrupter control information) in the first and second frames so as to be visually perceptible upon examination of the first frame and second frame, but generally imperceptible upon real-time rendering of the video. There is no mention of this at all. Instead, Schuman's disruption directives (or control information) include information that controls the disrupter to insert anomalies or modulations during projection. Thus, the "disruption directives" are not the "projected anomalies" that are contained in projected video (page 12, second paragraph, to page 13, second paragraph).

Examiner disagrees.

Schuman (col. 6, lines 16-24) clearly teaches "inserting spaced marks into a generated image so as to coincide with the spacing of the image elements on image sensing devices optical sensors." Thus, one of ordinary skill in the art can clearly infer that said marks would be readily perceptible to the human eye if one were to inspect the frames of the generated [video] image one at a time. Further, because said marks on said generated images are *spaced* [emphasis added] in the manner described, they are not humanly perceptible while the video is rendered. Meanwhile, Col. 6, lines 40-43 of Schuman, clearly teaches that the spaced marks, or disruption content, may become visible when played after being recorded (e.g., by a camcorder). Column 16, lines 8-15 of Schuman clearly further discusses this. Thus, Schumann clearly teaches the limitation of claim 1 "embed the disruption directives (or disrupter control information) in the first and second frames so as to be visually perceptible upon examination of the first frame and second frame, but generally imperceptible upon real-time rendering of the video."

Claim 2

Schuman does not anticipate claim 2 because it does not include - either expressly or inherently - at least an act of selecting that includes selecting a second frame so that the repetition of the embedded identification data is imperceptible to the human conscious mind when rendered. The relied upon Schuman Col. 6, lines 24-33, passage ("human eye may not detect them") relies on "reduced intensity" of generated images and not repetition of embedded identification data. In this regard, we submit that one of ordinary skill in the art will disagree with the Examiner's interpretation of claim 2 on page 13, lines 7-12, of the final Office Action. Citing Schuman at Col. 6, lines 17-21, the Examiner suggests that "intensity" refers to "intensity of repetition". There is no discussion in Schuman to support this interpretation. In fact, in the context of the cited passage (including Col. 6, lines 17-34) "intensity" should be interpreted as "brightness" or "signal strength" (page 14, second through penultimate paragraphs).

Examiner disagrees.

As Appellant points out, the word "intensity" may reasonably refer to brightness or signal strength of said marks (e.g., disruption or identification content). However, as already mentioned in the response

to the arguments of claim 40, the higher the number of frames within a first group of frames which contain marks (e.g., disruption or identification content) the more visible the marks become. Thus, one of ordinary skill in the art would readily recognize that the word "intensity" also might reasonably be interpreted as "intensity of repetition."

Claim 8

The final Office Action cites Schuman at Col. 6, lines 24-34 to meet the features of claim 8, including the "imperceptible" feature. See the final Office Action, page 4, third paragraph. Schuman mentions imperceptibility (e.g., "the human eye may not detect them") at Col. 6, lines 31-34, and proposes a solution by: "If the generated images are of a reduced intensity, the human eye may not detect them." (emphasis added). Schuman's imperceptibility relies on "reduced intensity," and not on repetition of embedded identification data. In the context of the cited passage (including Col. 6, lines 17-33) "intensity" should be interpreted as "brightness" or "signal strength". The final rejection of claim 8 should be reversed since Schuman does not include - either expressly or inherently - at least selecting a second frame so that the repetition of the embedded identification data is imperceptible to the unconscious human mind (page 15, second paragraph to fourth paragraph).

Examiner disagrees.

See response to the arguments of claim 2.

Claim 3

Claim 3 recites that the identification data (of claim 1) is embedded in the same frame location in each of the first and second frames. Contrary to the assertions in the final Office Action (see pages 14-15, paragraph 9), the relied upon Schuman passage at Col. 6, lines 58-67, does not discuss this feature. Rather, Schuman discusses that identifying information may indicate a location and time that an event was recorded. There is no discussion or suggestion in the above quoted passage of identification data (of claim 1) that is embedded in the same frame location in each of the first and second frames. Additionally, the parenthetical on page 3 of the final Office Action (and the remarks on page 13) seems to evidence a

misunderstanding of claim 1: ("e.g., if a human is to perceive a message, the message has to be in substantially the same location from one frame to the next"). Claim 1 recites that embedded data is preferably imperceptible when rendered in real-time. The final Office Action's remarks assume perceptibility upon rendering, which is counter to the recited language of claim 3 (page 15, penultimate paragraph, to page 16, second and third paragraphs).

Examiner disagrees.

As stated above in the response to the arguments regarding claim 40, Schuman teaches a first group of frames include a number of frames which contain marks (e.g., disruption or identification content), said marks being visually imperceptible to a user. Thus, there is no assumption of perceptibility on the final Office Action. In other words, Schuman clearly teaches both the marks being visually imperceptible, as well as the marks being visually perceptible. As already has been mentioned, a mark would be visible to the naked eye if said mark is on a certain percentage of frames of a first group of frames, as exemplified by the Schuman's identifying information indicating a location and time an event was recorded. Meanwhile said mark would be invisible if said mark was on a lower percentage of frames of said group of frames. The location of the mark would necessarily have to be substantially the same from frame to frame for said mark to be visible to the naked eye, as one of ordinary skill in the art would readily appreciate. In conclusion, in order to be visible to the naked eye, a mark would need to be on a certain percentage of a group of frames, as well as be located on the same area from frame to frame. Thus, there is no misinterpretation of claims 1 or 3.

Claim 5

The final Office Action cites Schuman at Col. 6, lines 58-67 to meet these features. That Schuman passage, however, is lacking since it does not discuss device-aided character recognition. While it mentions "text," there is no discussion of recognizing such text with device-aided, character recognition techniques. There is no discussion or suggestion in the above passage of an act of providing device-aided character recognition, e.g., OCR or other character recognition, to detect identification data. The final Office Action justifies its citation to the above Schuman passage by saying any such detection

includes "humanly perceiving the message." See the final Office Action, page 3, last 3 lines. But humanly perceiving a message is not device-aided character recognition as claimed. This statement evidences a misinterpretation of the claim in the final Office Action. The final Office Action further states that "... a device aids (either the IRD or the IGD) in the character recognition." See the final Office Action, page 14, lines 14-15. This statement is not helpful because Schuman does not disclose or suggest that the IRD (e.g., a camcorder) or the IGD (e.g., a movie projector) include device-aided character recognition capability, e.g., OCR or other character recognition, to detect identification data from first or second frames (page 17, second paragraph to page 18 first paragraph).

Examiner disagrees.

As stated on the final Office Action, Schumann teaches (Col. 6, lines 58-67) a human perceiving a copyright message (e.g., logo or text) aided by an IRD (e.g., a camcorder) or the IGD (e.g., a movie projector). Because the IRD and IGD help display the text of the copyright information, one of ordinary skill in the art would readily understand that this is "device-aided character recognition."

Claim 12

Claim 12 is dependent on claims 11 and 1. These claims discuss first and second different frames. In this context, claim 12 requires that each of the plurality of identifiers is embedded to be spatially located in a separate frame location with respect to each other. That means, the spatial location of each identifier from a first frame to a second frame is different. The final Office Action cites the now familiar Schuman, Col. 6, lines 58-67, for these features. But there is no discussion at the cited passage of each of a plurality of identifiers is embedded to be spatially located in a separate frame location with respect to each other. We respectfully request that the final rejection of claim 12 be reversed since Schuman does not include - either expressly or inherently - at least each of a plurality of identifiers is embedded to be spatially located in a separate frame location with respect to each other (page 18, paragraph starting with ""Claim 12 is dependent [...]" to page 19, second paragraph).

Examiner disagrees.

Col. 6, lines 58-67 of Schuman teaches a multitude of data to be inserted into a frame of a video (e.g., copyright information, location and time of an event, watermarks, etc). As one of ordinary skill in the art would readily recognize, this information would necessarily have to be inserted into separate frame area from frame to frame, when said information was not to be made visible to the naked eye and said information is be included in a percentage of frames above the threshold for which visible information is perceptible for a given frame area. Further, Col. 7, l. 63 to col. 8, l. 2 of Schuman explicitly teaches varying the timing and location of disruptive information.

Claim 23

1) The final Office Action cites Schuman at Col. 6, lines 24-34, for the claim features of "so as to be humanly perceptible if examined in a finite segment or frame of the content, but is embedded in the content so as to be humanly imperceptible when examined as the content is rendered or projected in real-time." See the final Office Action, page 6, first paragraph. We disagree. As discussed above with respect to claim 1, this Schuman passage discusses that so-called disruption content can be included in projected content. There is no discussion in the above passage to anticipate control information that is perceptible if examined in a finite segment, but that is imperceptible when examined as the content is rendered. Moreover, the above quoted passage would lead a skilled artisan away from claimed combination. For example, the cited passage states: "If the generated images are of a reduced intensity, the human eye may not detect them." This is different than control information that is perceptible if examined in a finite segment, as claimed (page 19, paragraph starting with "The Final Office Action [...]" to page 20, paragraph starting with "Moreover, the above [...]").

Examiner disagrees.

Schuman (col. 6, lines 16-24) clearly teaches "inserting spaced marks into a generated image so as to coincide with the spacing of the image elements on image sensing devices optical sensors." Thus, one of ordinary skill in the art can clearly infer that said marks would be readily perceptible to the human eye if one were to inspect the frames of the generated [video] image one at a time. Further, because said marks on said generated images are *spaced* [emphasis added] in the manner described, they are not

humanly perceptible while the video is rendered. Meanwhile, Col. 6, lines 40-43 of Schuman, clearly teaches that the spaced marks, or disruption content, may become visible when played after being recorded (e.g., by a camcorder). Column 16, lines 8-15 of Schuman clearly further discusses this. Thus, Schumann clearly teaches the limitation of claim 1 "embed the disruption directives (or disrupter control information) in the first and second frames so as to be visually perceptible upon examination of the first frame and second frame, but generally imperceptible upon real-time rendering of the video."

2) The final Office Action also misinterprets Schuman. For example, the final Office Action cites to disruption directives (Schuman at Col. 7, lines 42-52; see the final Office Action, page 6, first paragraph) but then says that a generated image may contain disruption content. Recall from the discussion above under claim 1, however, that the disruption directives control the disruptor to introduce anomalies in projected content. The disruption directives are not the projected anomalies themselves. The final Office Action then cites to Schuman at Col. 17, lines 29-34, to somehow cure the problems noted above. See the final Office Action, page 15, last two lines above paragraph 11. This statement is not helpful to remedy the above deficiencies. Moreover, the final Office Action does not specify - or even offer evidence of- whether some known "image generation device" at the time of Schuman' s filing date possessed the missing elements to anticipate claim 23 (page 20, paragraph starting with "The final Office Action also […]" to page 21, first paragraph).

Examiner disagrees.

Schuman teaches both the Appellant acknowledged disruption directives controlling the disruptor to introduce anomalies in projected content, as well as, disruptive anomaly directives that are embedded into the generated image and later projected themselves. See, for example, figure 8, element S814, col. 12, l. 4-12 of Schuman "the content may undergo specific modification based on the analysis made." Further, Col. 8, l. 5-13 of Schuman explicitly teaches what those modifications might be (e.g., flickering bar, spnning alternate wheels, adjacent shifting vertical bars, etc).

Claim 27 and 37

The final rejection of claims 27 and 37 should be reversed for at least analogous reasons to those stated above with respect to claim 23 (page 21, last paragraph).

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Jordany Núñez/

Examiner, Art Unit 2175

2/12/2009

Conferees:

/William L. Bashore/

Supervisory Patent Examiner, Art Unit 2175

/Stephen S. Hong/

Supervisory Patent Examiner, Art Unit 2178